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465 Columbus Avenue
Suite 340
Valhalla, NY 10595

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marianne.fox@philips.com
patti.demichele@Philips.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOHANNES TSEARD VAN DER KOOI, BRITT ROUMEN, PIETER KINGMA, and MATTHIJS HENDRIKUS LUBBERS

Appeal 2019-002994
Application 14/432,518
Technology Center 3700

Before MICHAEL C. ASTORINO, BRUCE T. WIEDER, and ROBERT J. SILVERMAN, *Administrative Patent Judges*.

SILVERMAN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the Examiner's decision rejecting claims 1–3, 5–9, and 11–21. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. The Appellant identifies the real party in interest as Koninklijke Philips N.V. Appeal Br. 3. Citations herein refer to the Appeal Brief dated August 23, 2018.

ILLUSTRATIVE CLAIM

1. A nozzle arrangement for a cleaning device for cleaning a surface, said nozzle arrangement comprising:

- a nozzle housing having an opening defined by a plurality of sides;

- a single brush mounted in the nozzle housing and arranged to be rotated about a brush axis, said brush comprising a substantially cylindrical hollow core element having a plurality of distributed liquid-passage openings formed through a circumferential wall thereof and supporting a continuous array of flexible brush elements extending radially from a circumferential surface of the core element, said brush elements being arranged to extend through the nozzle housing opening to contact the surface to be cleaned and to pick up dirt particles and liquid from said surface during rotation of the brush;

- a first one of said sides extending in a longitudinal direction substantially parallel to the brush axis, said first side being located where the brush elements leave the nozzle housing during rotation of the brush and projecting so as to contact ends of the brush elements during said rotation;

- a wiping element for moving the dirt particles and liquid along the surface to be cleaned during movement of the cleaning device, said wiping element being arranged on a second longitudinally extending one of the sides defining the nozzle housing opening where the brush elements re-enter the nozzle housing during rotation of the brush, said second side being spaced apart from said re-entering brush elements to define a suction inlet for vacuuming the dirt particles and liquid from the surface to be cleaned;

- at least one side-sealing element arranged for at least partially sealing a first lateral one of the sides defining the nozzle housing opening, said at least one side-sealing element being spaced apart from an end of the core element such that a gap is formed between said end of the core element and said at least one side-sealing element; and

- a liquid supply arrangement configured to supply cleansing liquid into the cylindrical core element for passage through the plurality of distributed liquid-passage openings in said core element to wet the flexible brush elements and from at least one opening facing the at least one side-sealing element and aimed to direct cleansing fluid into said gap.

REFERENCES

Name	Reference	Date
Erickson	US 2,293,722	Aug. 25, 1942
Noble	US 2,949,620	Aug. 23, 1960
Waldhauser	US 4,817,233	Apr. 4, 1989
Sepke	US 5,475,893	Dec. 19, 1995
Delmas et al. ("Delmas")	US 5,722,109	Mar. 3, 1998
De Wit et al. ("De Wit")	US 2013/0025077 A1	Jan. 31, 2013

REJECTIONS

I. Claims 1–3, 5, 8, 9, 11, 12, 14, and 16–19 are rejected under 35 U.S.C. § 103(a) as unpatentable over Waldhauser, Noble, Erickson, and Official Notice.[2]

II. Claims 6 and 7 are rejected under 35 U.S.C. § 103(a) as unpatentable over Waldhauser, Noble, Erickson, Sepke, and Official Notice.

III. Claims 13, 20, and 21 are rejected under 35 U.S.C. § 103(a) as unpatentable over Waldhauser, Noble, Erickson, De Wit, and Official Notice.

IV. Claim 15 is rejected under 35 U.S.C. § 103(a) as unpatentable over Waldhauser, Noble, Erickson, Delmas, and Official Notice.

[2] Although Official Notice is omitted from the paragraph identifying the sources of teachings for the rejection of the independent claims (claims 1 and 14) in the Appeal, the Examiner's reliance upon Official Notice is stated in the accompanying text. *See* Final 2–3.

FINDINGS OF FACT

The findings of fact relied upon, which are supported by a preponderance of the evidence, appear in the following Analysis.

ANALYSIS

The Appellant argues that independent claims 1 and 14 stand rejected erroneously, because the cited references and Official Notice fails to teach or suggest the following limitation, which appears in both of the independent claims: "a liquid supply arrangement configured to supply cleansing liquid into the cylindrical core element for passage . . . from at least one opening facing the at least one side-sealing element and aimed to direct cleansing fluid into said gap." *See* Appeal Br. 16–24, Reply Br. 8–11.

As recited in, e.g., claim 1, the "gap" is formed from the spaced-apart relationship between "an end of the [substantially cylindrical hollow] core element [of the brush]" and "at least one side-sealing element arranged for at least partially sealing a first lateral one of the sides defining the nozzle housing opening."

According to the Examiner, the combination of Waldhauser and Official Notice suggest the formation of the claimed "gap." Final 2–3.

The Examiner relies on the Noble reference, for claim 1's recitation of "a liquid supply arrangement configured to supply cleansing liquid into the cylindrical core element for passage . . . from at least one opening facing the at least one side-sealing element and aimed to direct cleansing fluid into said gap." *See id.* at 3–5.

Noble discloses a "handle-mounted sponge-mop to which fresh wash water is supplied interiorly and from which dirty water is exhausted exteriorly." Noble col. 1, ll. 38–40. In operation, fresh wash water passes

through "rigid metal tubes 24," that "rotatably support . . . bearings 28 which are fixed to a perforate cylindrical metal tube 29 carrying a porous cylindrical sponge 30 of cellulosic material or the like," wherein "[t]he portions of the rigid tubes 24 inside the metal tube 29 and sponge 30 are also perforated." *Id.* at col. 2, ll. 3–8. Further, "[t]he bearings 28 are also perforated with holes 38 in order to admit air into the metal tube 29 during evacuation of the sponge 30 by contact with a shoe 35" that is perforated and is in communication with a vacuum device, "so that air and dirty water may be sucked up therethrough." *Id.* at col. 2, ll. 8–17. These features are shown in Noble's Figure 2, which is reproduced below:

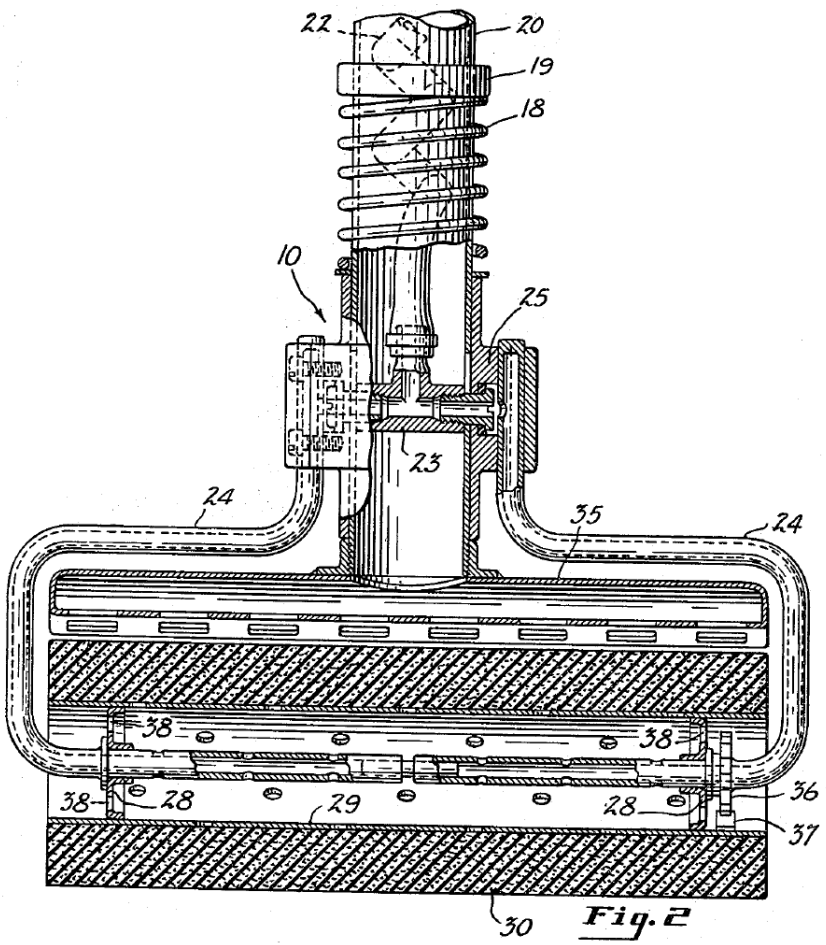

Fig. 2

Figure 2 is a vertical section and partial cutaway drawing of Noble's sponge mop. *See id.* at col. 1, ll. 49–50.

The Examiner acknowledges that Noble does not disclose the egress of liquid from Noble's metal tube 29 (to which the Examiner maps the claimed "core") through holes 38. Final 4. Nevertheless, the Examiner finds that such outward passage of liquid through Noble's holes 38 would occur inherently:

> [T]he brush core of Noble is further discloses [sic] to include additional apertures (38) on a transverse side of the brush core to allow airflow into the brush core for improved fluid flow through the brush, which will be *inherently capable* of allowing fluid to exit through the side apertures and thus further supply liquid to the gap between the brush core and the sealing elements.

Id. at 4. *See also* Answer 5–6. According to the Examiner: "Although Noble discloses that the axial openings [38] are intended for allowing airflow into the core when suction is applied to the mop, the openings would also inherently allow liquid to flow outward due to the location adjacent to the outer wall of the core." Answer 6. The Examiner finds that Noble's holes 38 "would be inherently capable of releasing at least some liquid laterally from the core, particularly if/when the brush is slowly rotating." *Id.* at 5.

The Appellant argues that Noble is not inherently configured for the identified holes 38 of to emit cleaning liquid into the "gap" between the "core" and a "side-sealing element," per claim 1. *See* Appeal Br. 22–23, Reply Br. 8–11.

Our reviewing court has defined the requirements for determining whether a limitation is inherent:

> Inherency can be established when "prior art necessarily functions in accordance with, or includes, the claimed limitations." *In re Cruciferous Sprout Litig.*, 301 F.3d 1343, 1349 (Fed. Cir. 2002). "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *In re Oelrich*, 666 F.2d 578, 581 (CCPA 1981).

Bettcher Indus., Inc. v. Bunzl USA, Inc., 661 F.3d 629, 639 (Fed. Cir. 2011).

Whether liquid would pass out of Noble's metal tube 29, through holes 38, would depend upon various factors, including the rate of liquid flowing through rigid tubes 24. Notably, Noble's Figure 2 shows structures that impede any egress of fluid through holes 38 and out of metal tube 29 to where the Examiner locates the claimed "gap." For example, holes 38 (which pass through the bearings 28) are spaced radially inward from the inner wall of tube 29 and, furthermore, holes 38 are inset from the ends of tube 29. The Examiner maintains that the holes are "inherently capable of releasing at least some liquid laterally from the core, particularly if/when the brush is slowly rotating" (Answer 5), but the Examiner does not adequately articulate the conditions required for such passage of fluid to occur — let alone explain whether the necessary conditions are disclosed in Noble.

In view of the foregoing, we are persuaded of error in the rejection of independent claim 1, because the Examiner has not sufficiently shown that the cited prior art and Official Notice teach or suggest the claimed "liquid supply arrangement configured to supply cleansing liquid into the cylindrical core element for passage . . . from at least one opening facing the at least one side-sealing element and aimed to direct cleansing fluid into said gap." The same analysis applies to claim 14 (the only other independent claim in the Appeal), which includes an identical limitation.

Therefore, we do not sustain the rejections of claims 1–3, 5–9, and 11–21 under 35 U.S.C. § 103(a).

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–3, 5, 8, 9, 11, 12, 14, 16–19	103(a)	Waldhauser, Noble, Erickson, Official Notice		1–3, 5, 8, 9, 11, 12, 14, 16–19
6, 7	103(a)	Waldhauser, Noble, Erickson, Sepke, Official Notice		6, 7
13, 20, 21	103(a)	Waldhauser, Noble, Erickson, De Wit, Official Notice		13, 20, 21
15	103(a)	Waldhauser, Noble, Erickson, Delmas, Official Notice		15
Overall Outcome				1–3, 5–9, 11–21

REVERSED